## batmatic

# FORWARD PLATE COMPACTOR FPH1650 – FPR1650



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#### **FOREWORD**

We thank You to choose a BATMATIC plate compactor. Your new machine is an useful and safety job's tool.

Observing the safety regulations and the instructions in this book there will not be physical injury and the plate will be always in good condition.

Worn-out machine parts are to be replaced as soon as possible. You will find the code numbers to order the spare parts in the chapter "Spare parts" in this instruction book.

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#### SAFETY INSTRUCTIONS FOR PLATE COMPACTORS

#### **SAFETY**

- Plate compactors must only be operated by person who:
  - \* is at least 18 years old;
  - \* is physically and mentally fit for this job;
  - \* may be expected to carry out the job he's charged with carefully.

The employer must directly assign people who guide plate compactor.

- Plate compactors must only be used for compaction jobs observing safety and operating instructions.
- People who work with plate compactors must know everything regarding safety instructions.
- Do not take drugs or drink alcohol before using plate compactors.
- Always wear appropriate protective clothes (ear protections, gloves, protecting shoes and helmet).
- Do not alterate the operation devices of the plate compactor.
- Do not leave control elements during compaction.
- Store the compactor with engine off in a safe place.
- Always refill fuel tank when the engine is off. Do not allow fuel to come into contact with the hot parts of compactor and engine.
- Do not smoke when using compactor. Keep the compactor out of open flames.
- Always check fuel tank cap. If there is a fuel cock, shut it off when the engine is not working.



#### **WARNING**

If fuel tank leaks, replace it immediately: A fuel tank in bad conditions could explode.

- Do not use the compactor in places where there are gaseous exhalations.
- Do not use the machine indoors or in an enclosed area unless inadequate ventilation.
- Always wear appropriate protective clothes.
- When the work area is near slopes, the compactor could turn over.
- When you use compactor in reverse and in a narrow place, the operator must be sideways from the handle in order to avoid stumbling.
- Always operate in safe conditions in order to avoid accidents.
- Always operate in maximum stability conditions.
- Use transport wheels only for movements in yard. In all the other situations they must be removed.
- Always make sure of the proper functioning of the safety and control devices.
- If there are any problems, stop immediately the machine and inform the person responsible of the yard.

#### TRANSPORT AND LIFTING

- Do not lift the compactor when is running.
- Check that lifting points are not damaged.
- For loading and unloading the compactor, appropriate lifting-gear are necessary which have to be used on the lifting points.
- Be sure that the ramps are fixed and check the tolerable weight in order to avoid turnovers.
- Do not transport compactors when engine is running.
- Tie the machine on vehicle to prevent sliding or tipping over.
- For long transports, empty completely the fuel tank and close it.



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#### **WARNING**

Do not lift or hook the plate compactor by the handle.

#### **MAINTENANCE**

- Use original spare parts only.
- Do not alterate the operation devices of plate compactor.
- Do not turn the engine on without air filter.



#### **WARNING**

Modifications in this machine are subject to the express approval of BATMATIC which in case of non observance will refuse all liabilities and all warranties

- Do not make maintenance operations when machine is running or when engine is on.
- As soon as maintenance and repair jobs have been completed, all safety devices have to be properly reinstalled.

#### PERIODIC MAINTENANCE

Regular maintenance is required for a good performance of the compactor.

#### **FIRE**

In the case of a fire in the machine, if possible use an AB class powder extinguisher.

#### **RESIDUAL RISK**

Plate compactors are designed for absorbing a large part of machine vibrations.

Depending on the operation, the ground conditions and exposure time, the recommended limits for hand-arm vibrations may be exceeded.



#### **WARNING**

Do not use the machine on grounds already compacted.

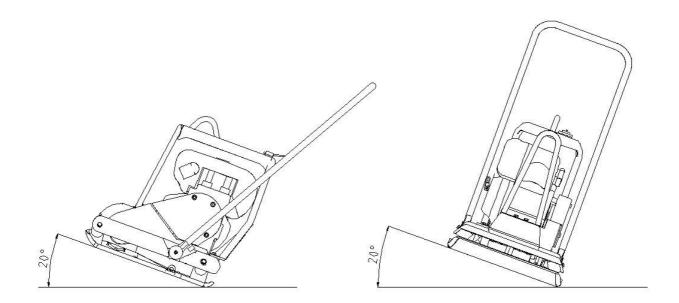
Long exposure to vibrations can damage the hands and wrists. Do not use the machine if you experience discomfort, cramp or pain and consult a doctor before restart working with the machine.

Long exposure to loud noise without ear protector can cause permanent damage to hearing.

Please also observe regulations valid in Your yard.

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#### **CLIMBING ABILITY**



#### **FUNCTION**

The vibration required for tamping is produced by the exciter which is on the compacting plate.

The engine starts the exciter and the torque is transmitted by the centrifugal clutch and by the belt.

In order to allow the idling of the drive engine, the centrifugal clutch, at low engine speeds, interrupts the flow of power to exciter. The compactor must always be used with the gas handle in the "OPERATIVE" position.

The engine supporting and the compacting plates are connected by 4 shockmount, which are mounted to avoid that vibrations reach the operator.

#### **APPLICATIONS**

The compactor FP1650 is suitable for asphalted road maintenance, small tamping garden jobs. Only use the machine for the purpose for which it is intended.

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#### **OPERATION**

#### **CHECKS BEFORE STARTING**

- Before start using compactor, carefully read instruction manual.
- Engine oil level
   Check oil level using the proper dipstick. If necessary refill with SAE 15 W 40 oil.
- Air filter
   Check that air filter is clean and in good condition. If necessary clean or replace it.
- Fuel

Never use oil/gasoline mixture or dirty fuel. Avoid getting dirt, dust or water into fuel tank. Refuel avoiding leaks on engine.

#### **ENGINE STARTING (MANUAL)**

- Open the fuel valve.
- Move the throttle lever to 3/4 position.
- Turn the choke lever (if present).
- Turn the engine switch on the ON position.
- Pull the starter grip lightly until resistance is felt, then pull briskly.

Pull hand crank until it starts, in order to avoid counterblows

- As the engine warms up, gradually move the choke lever (if present).
- Warm up the engine at the minimum speed for some minutes.
- The compactor will start moving when the throttle lever is in operative position.

#### **ENGINE STOPPING (MANUAL)**

- Move the throttle lever to the minimum position. Warm up the engine at the minimum speed for some minutes.
- Turn the engine switch on the OFF position.



#### **WARNING**

Never operate the engine switch when the engine is at the maximum speed.

• Turn the fuel valve on the OFF position.

#### **ENGINE OIL**

Check oil level using the proper dipstick, if necessary refill with SAE 15 W 40 oil.

Oil change

- Drain oil at warm engine.
- Refill with SAE 15W40 oil.



#### WARNING

Only use oil with characteristics advised by the manufacturer engine (see engine book).

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#### **AIR FILTER (DRY)**



#### **WARNING**

Clean air filter daily in order to avoid engine damages.

- Open air cleaner and remove element.
- Lightly and repeatedly tap the element on a hard surface to eliminate all excess dirt.
- Clean the element.
- Refit the air filter. Do not run the engine without the air filter.

#### **AIR FILTER (OIL BATH)**



#### **WARNING**

Clean air filter daily in order to avoid engine damages.

- Open air cleaner and remove upper element.
- Wash the upper filtering element with soap and water.
- Clean the upper bowl.
- Remount the upper filtering element.
- Remove the lower filtering element.
- Clean and dry filtering element.
- Drain and clean bowl.
- Fill with engine oil up to level mark.
- Reassemble air cleaner.



#### **WARNING**

Never use gasoline or low flash point solvents for cleaning the air filter to avoid fire and explosions.



Do not disperse oil, batteries, fuel and dangerous substances in the environment, as they have high pollution power.

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#### **MAINTENANCE**

| PARTS                   | MAINTENANCE   | INTERVAL    |
|-------------------------|---|-------------|
| Air filter              | Check filter, clean or replace if necessary             |             |
|                         | Check filter oil level (only oil bath models)           |             |
| Fuel tank               | Check fuel tank and fuel cap lid. If necessary replace. | daily       |
| Engine                  | Check oil level, refill if necessary                    |             |
| Engine                  | Check engine RPM  |             |
| Exciter                 | Check exciter lid                                       |             |
| Engine                  | First oil change  | After 20 h  |
| Engine                  | Clean spark plug  | Monthly     |
| V-Belt                  | Check V-belt tension                                    | Monthly     |
| Fuel Tank               | Check fuel filter, replace if necessary                 |             |
| Engine                  | Oil change  | After 100 h |
|                         |   |             |
| Exciter (bath oil only) | Check oil level, refill if necessary                    | After 150 h |
| Exciter (bath oil only) | Oil change  | After 250 h |

#### TROUBLE, CAUSE, SOLUTION

| TROUBLE  | POSSIBLE CAUSE                                     | SOLUTION   |
|--|--|--|
|  | The transmission belt is broken                    |  |
| The engine works properly but the machine does not vibrate                               | The wear and tear has caused the belt to loosen up | Replace the belt   |
|  | The centrifugal clutch has broken                  | Replace the centrifugal clutch   |
|  | The engine rpm is not correct                      | Verify that during compaction gas lever is in "OPERATIVE" position                         |
| Reduced or irregular speed   |  | Reset the number of engine rpm   |
|  | The transmission belt has loosened up              | Tension the transmission belt and, if necessary, replace it                                |
| The engine rpm are low but the exciter does not stop                                     | Centrifugal clutch malfunction                     | Repair the centrifugal clutch and, if necessary, replace it                                |
| The exciter heats up to over 90° (bath oil only)   | There is too much of oil in the exciter            | Top up the oil level. Check whether the oil seal has been damaged; if necessary replace it |
| The engine works with difficulty and the exciter is too noisy and it stops or slows down | Mechanical block of the exciter (bearings, shaft)  | Remove the element causing the failure or, if necessary, replace the exciter               |
| The engine turns off or does not work properly   | Fuel tank empty                                    | Add fuel   |
|  | Oil lack   | Add oil  |
|  | Dirty air filter                                   | Clean air filter, if necessary replace it  |
|  | Engine damaged                                     | Contact an engine service center   |

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#### **LUBRIFICANTS**

|         | Model      | Quantity                | Туре      |
|---------|------------|-------------------------|-----------|
| Exciter | FP 1650    | Dry Exciter             |           |
| Engine  | All models | See engine instructions | SAE 15W40 |

#### **ENGINE / EXCITER REVS**

| Model   | Engine      | Exciter     |
|---------|-------------|-------------|
| FP 1650 | 3500 – 3550 | 5350 – 5400 |



#### **WARNING**

Set the rpm as per the above table. A different rpm will not make the compactor working properly and could break it. If the set rpm is changed, the warranty will not be recognized.

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#### **TECHNICAL DATA**

| Model                              | FPR1650 FPH1650                     |              | 650     |          |                          |
|------------------------------------|-------------------------------------|--------------|---------|----------|--------------------------|
| Dimensions plate<br>Width x Length |                                     | mm 500 x 560 |         |          |                          |
| Operating weight                   | With Lifting Hool                   | k With F     | Rollbar | With R   | ollbar and Water<br>Tank |
| FPH1650                            | kg 88                               | kg           | 89      |          | kg 91                    |
| FPR1650                            | kg 87                               | kg           | 88      |          | kg 90                    |
| Working speed                      | 25 m/min                            |              |         |          |                          |
| Max climbing ability               | 20 %                                |              |         |          |                          |
| Frequency                          | 90 Hz                               |              |         |          |                          |
| Centrifugal force                  | 16 kN                               |              |         |          |                          |
| Transmission                       | Centrifugal clutch / belt           |              |         |          |                          |
| Engine                             | Air-cooled single-cylinder 4 stroke |              |         |          |                          |
| g5                                 | Subaru E                            | X 16         |         | Honda G  | SX 160                   |
| Engine power                       | kW 3,4 (HP 4,5)                     |              |         | kW 3,6 ( | HP 4,8)                  |
| Displacement                       | 126 cm <sup>3</sup>                 |              |         | 163 c    | cm³                      |
| Fuel                               | Petrol                              |              |         |          |                          |
| Fuel consumption                   | 1,4                                 |              |         | 1,4      | <b>L</b>                 |
| Fuel tank capacity                 | 2,7 ltrs                            |              |         | 3,1 l    | trs                      |

#### **SOUND MEASUREMENTS**

The product has been produced in accordance with the standard 2000/14/CE, procedure I annex VI.

Measured sound power level  $99 \, [dB(A)]$  and guaranteed sound power level  $103 \, [dB(A)]$  on a significant equipment.

#### **VIBRATION MEASUREMENTS**

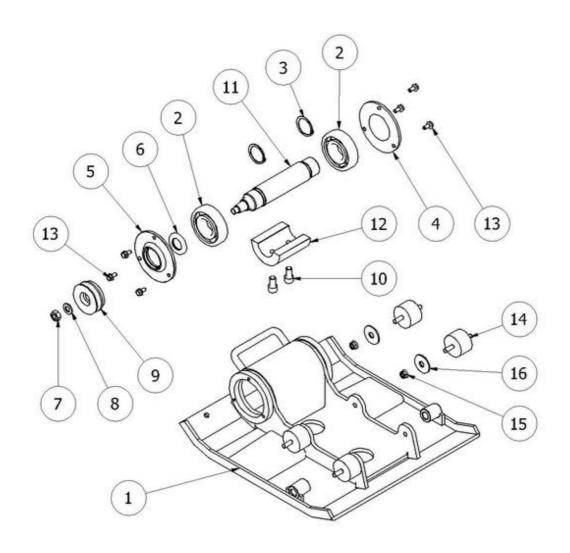
Products are tested for hand/arm vibration level in accordance with annex D prEN500-4:2001 The hand/harm vibration level is  $9.2 \text{ m/s}^2$ 

The plate compactor has been tested on a "macadam" surface, produced with not cleaned stone crusher grit, with 16 mm medium diameter (with components which have diameter that goes from 10 to 20 mm).

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#### **EXPLODED VIEW**

#### **EXCITER - BASE PLATE**



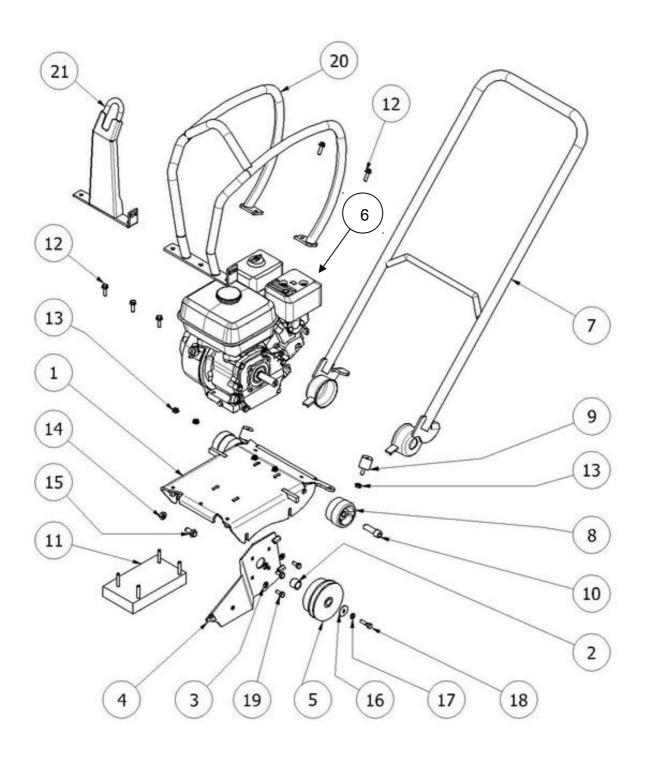
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#### **EXCITER - BASE PLATE**

| POS | CODE   | DESCRIPTION                       | Q.TY |
|-----|--------|-----------------------------------|------|
| 1   | 560132 | BASE PLATE FP1650                 | 1    |
| 2   | 151106 | BEARING NSK 6309 2RS C3 VV        | 2    |
| 3   | 151102 | SEEGER E45 UNI 7435               | 2    |
| 4   | 560071 | CLOSED EXCITER COVER              | 1    |
| 5   | 560068 | OPENED EXCITER COVER              | 1    |
| 6   | 131043 | OILSEAL 30X55X7 BA                | 1    |
| 7   | 151456 | NUT M14 UNI5588                   | 1    |
| 8   | 151472 | WASHER. M14 UNI 6592 ZN           | 1    |
| 9   | 560148 | EXCITER PULLEY                    | 1    |
| 10  | 151114 | SCREW M14X25                      | 2    |
| 11  | 560090 | EXCITER SHAFT                     | 1    |
| 12  | 560167 | 16 KN WEIGHT FP1650               | 1    |
| 13  | 152040 | SCREW FLG DIN 6921 M8X16 8.8 ZN   | 6    |
| 14  | 131104 | SHOCKMOUNT MM D57X37 M10X25 60 SH | 4    |
| 15  | 151904 | FLANGED NUT DIN 6923-M10          | 4    |
| 16  | 151154 | WASHER M14X48                     | 4    |

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#### **ENGINE SUPPORT**



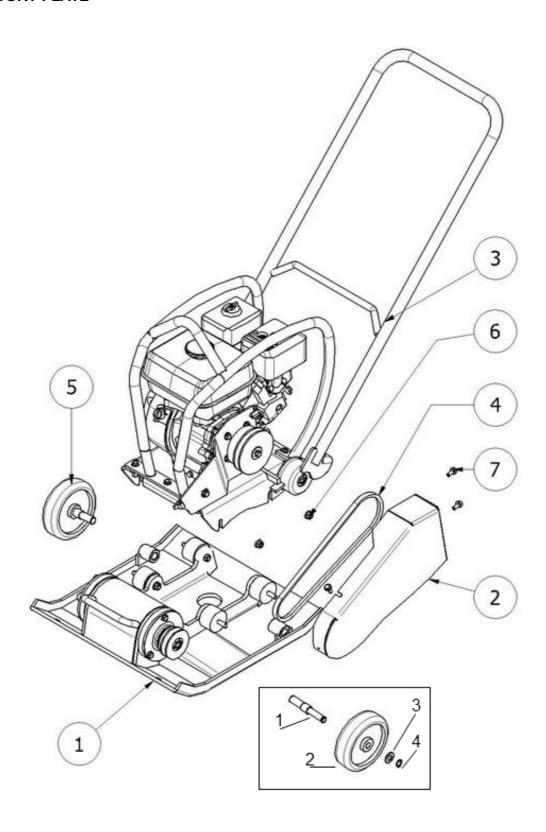
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#### **ENGINE SUPPORT**

| POS | CODE   | DESCRIPTION                        | Q.TY |
|-----|--------|------------------------------------|------|
| 1   | 560168 | ENGINE SUPPORT                     | 1    |
| 2   | 560149 | PULLEY SPACER FOR ENGINE SUPPORT   | 1    |
| 3   | 151199 | WASHER M 8 UNI 6592 ZN             | 4    |
| 4   | 560184 | BELT PROTECTION HOLDER             | 1    |
| 5   | 152286 | CENTRIFUGAL CLUTCH 19,05 IORI      | 1    |
| 6   | 181139 | HONDA ENGINE GX 160                | 1    |
| 6   | 182273 | SUBARU ENGINE EX 13                | 1    |
| 7   | 560176 | HANDLE                             | 1    |
| 8   | 560037 | HANDLE SHOCKMOUNT DIAM. 75 - 50 SH | 2    |
| 9   | 131927 | SHOCKMOUNT PM 30X20 M8X23 60 SH    | 2    |
| 10  | 151359 | SCREW TCEI M14X 45 12.9 UNI 5931   | 2    |
| 11  | 560152 | WEIGHT FOR ENGINE SUPPORT          | 1    |
| 12  | 152038 | SCREW TE FLG M8X25 8.8 ZN          | 5    |
| 13  | 151123 | FLANGED NUT DIN 6923-M8            | 6    |
| 14  | 151904 | FLANGED NUT DIN 6923-M10           | 1    |
| 15  | 152037 | SCREW TE FLG M10X25 8.8 ZN         | 1    |
| 16  | 152192 | WASHER M8X32                       | 1    |
| 17  | 151807 | CONTACT WASHER 8(8.2X18X1.4)ZN     | 1    |
| 18  | 151122 | SCREW TE 5/16-24 UNF -1"1/4 UNF    | 1    |
| 19  | 151309 | SCREW TE 5/16-24X3/4" 8.8 UNF      | 4    |
| 20  | 560169 | ROLLBAR FOR WATER TANK             | 1    |
| 21  | 560198 | LIFTING HOOK                       | 1    |

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#### **VIBRATORY PLATE**



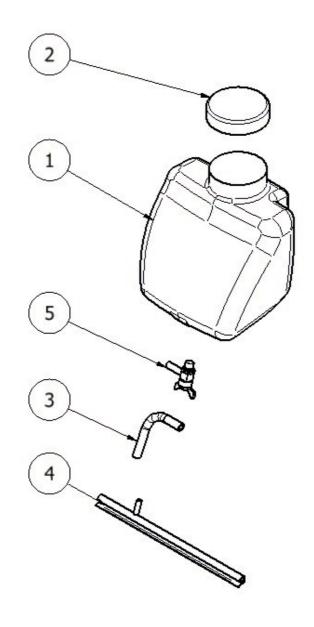
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#### **VIBRATORY PLATE**

| POS | CODE   | DESCRIPTION                     | Q.TY |
|-----|--------|---------------------------------|------|
| 1   |        | COMPL. BASE PLATE FP1650        | 1    |
| 2   | 560180 | BELT PROTECTION                 | 1    |
| 3   | 560154 | ASSY ENGINE SUPPORT             | 1    |
| 4   | 131030 | BELT A33                        | 1    |
| 5   | 560203 | WHEEL WITH AXLE                 | 2    |
| 6   | 151904 | FLANGED NUT DIN 6923-M10        | 4    |
| 7   | 152040 | SCREW FLG DIN 6921 M8X16 8.8 ZN | 3    |
|     |        |                                 |      |
| 1   | 560036 | AXLE                            | 2    |
| 2   | 131212 | WHEEL                           | 2    |
| 3   | 151472 | WASHER                          | 2    |
| 4   | 151816 | SEEGER                          | 2    |

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#### **WATER TANK**



#### **WATER TANK**

| POS | CODE   | DESCRIPTION                                    | Q.TY    |
|-----|--------|--|---------|
| 1   | 132062 | WATER TANK                                     | 1       |
| 2   | 132254 | WATER TANK CAP                                 | 1       |
| 3   | 132205 | RUBBER HOSE                                    | 0,15 mt |
| 4   | 560190 | SPRINKLING PIPE FP1650                         | 1       |
| 4   | 560145 | SPRINKLING PIPE FP 1650 (valid until 31/12/12) | 1       |
| 5   | 152276 | WATER VALVE GAS RB9085 3/8-8                   | 1       |
| 6   | 560175 | NUT GAS 3/8 H15 CH 27 ZN (INSIDE WATER TANK)   | 1       |

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#### WARRANTY

Your new BATMATIC Plate Compactor is warranted to the original purchaser for a period of one year (36 months) from the original date of purchase.

The BATMATIC warranty is against defects in design, materials and workmanship.

The following are not covered under the BATMATIC warranty:

- 1. Damage caused by abuse, misuse, dropping or other similar damage caused by or as a result of failure to follow assembly, operation or user maintenance instructions.
- 2. Alterations, additions or repairs carried out by persons other than BATMATIC or their recognized agents.
- 3. Transportation or shipment costs to and from BATMATIC or their recognized agents, for repair or assessment against a warranty claim, on any machine.
- 4. Materials and/or labor costs to renew, repair or replace components due to fair wear and tear.
- 5. Engine

BATMATIC and/or their recognized agents, directors, employees or insurers will not be held liable for consequential or other damages, losses or expenses in connection with or by reason of or the inability to use the machine for any purpose.

#### **Warranty Claims**

All warranty claims should firstly be directed to the local dealer, either by telephone, by fax, by email, or in writing.

#### **USE ONLY GENUINE BATMATIC PARTS AND ACCESSORIES**

For your own safety, the safety of others and the life of your machine

### batmatic

#### **EC DECLARATION OF CONFORMITY**

WE

Batmatic srl Via romitaggio 31 43010 Bianconese di Fontevivo (Parma) - Italia

HOLDER OF TECHNICAL DOCUMENTATION SHOWED DECLARE UNDER OUR SOLE RESPONSIBILITY THAT THE PRODUCT

| Туре                         | Forward Plate Compactor    |
|------------------------------|----------------------------|
| Model                        | ( ) FPH1650                |
| Net installed power          | kW 3,6                     |
| Model                        | ( ) FPR1650                |
| Net installed power          | kW 3,4                     |
| Serial Number                |                            |
| Brand                        | Batmatic                   |
| Applications                 | Asphalted road maintenance |
| Measured sound power level   | 99 [dB(A)]                 |
| Guaranteed sound power level | 103 [dB(A)]                |

HAS BEEN PRODUCED IN ACCORDANCE WITH THE STANDARD 2000/14/CE, PROCEDURE I ANNEX VI

AND HAS BEEN PRODUCED IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

2006/42/CE EN 500-1 EN 500-4

AND WE AUTHORIZE

Saj Ferrante Batmatic srl Via romitaggio 31 43010 Bianconese di Fontevivo (PR)

| TO SERVE THE TECHNICAL DOCUMENTATION |
|--------------------------------------|
| Bianconese, Ii                       |

Saj Perrante Presidente

|           |         | 1 00.10 50.1 |
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